Program Manager for Ammunition
Marine Corps Systems Command

# Ammunition Quarterly

Supporting the Warfight
A Marine Corps Tradition
A Marine Corps Systems Command Publication

Vol. 12 | No. 2 | Spring | 2006



**Program Manager For Ammunition**
Mr. Jerry L. Mazza

**Editor**
Mr. Charles Black

Ammunition Quarterly

The Ammunition Quarterly is published by the Program Manager for Ammunition, Marine Corps Systems Command . Photos not credited are official USMC photos. Articles provided herein are to enhance the technical knowledge and explosive safety stance of Marine Corps personnel involved in ammunition operations. Information disseminated herein is not official Marine Corps policy and is non-directive. Reader comments are welcomed.

Provide ideas/articles to the Program Manager for Ammunition, MARCORSYSCOM, 2200 Lester Street, Quantico, VA 22134-5010, or via e-mail to AmmoMail@usmc.mil

## From the Program Manager

*Mr. Jerry Mazza*
*Program Manager for Ammunition*

Welcome to the Spring edition of our "***Ammunition Quarterly***." As we continue to mature our ammunition business processes, especially from a wartime perspective, I felt it extremely important to keep the Global War on Terrorism (GWOT) focus in this, and ensuing editions. During April 2006 at the request of Multi-National Forces-West (MNF-W), PM Ammunition deployed two explosive safety specialist in theater with the primary goal in completing final site approval packages for all ammunition storage areas within the MNF-W's theatre of operations started during the Technical Assistance Visit (TAV) 1-31 July 2005.

As feed back to this Technical Assist Visit, Captain Dan Guimond and Mr. Michael James of my staff have provided an excellent recap of accomplishments, issues, and events while deployed. It is noteworthy reading for any ammunition officers who may find themselves deployed to this, or any theater of operations. Similarly and complimentary to this article, is a submission we pulled from MC News which focuses on Ammunition Supply Point Operations at Camp Taqaddum, Iraq. This well written article reveals the real world of ammo techs in a combat zone. And, this is where these articles will bear fruit. You should know that the knowledge base of your ammo community is subtly changing. Our junior ammunition techs and Officers are gaining a wealth of real world knowledge. These individuals will be our future leaders and better prepare us in ammunition support for future conflicts.

As a side issue, I recently reviewed the May, 1995 "***Ammunition Quarterly***", our first edition. From time to time, we all take inventory of our environment. In terms of this publication, now a decade in circulation, I do wonder about the depth and breadth of readership, the value of this communication tool, and the road ahead.

I have received personal emails from General Officers over the years commenting on the publication as a whole, or a specific topic. I need to make sure however, that we are addressing the right issues, providing the kinds of informative and meaningful information that augments formal, informal, and on-the-job training. With that said, a simple confirmation: If you read this edition, please send an email to me. Although welcomed, nothing is required in terms of comment, recommendations, and/or critique. Just an email to:

Jerry.Mazza@USMC.MIL.

It would be much appreciated.

Semper fi,

Jerry

# Explosive Safety Team Conducts Technical Assist Visit to Iraq

**Capt Dan Guimond and Mr. Michael James**

*The Multi-National Forces-West (MNF-W) Ammunition Officer requested a Technical Assist Visit (TAV) from Marine Corps Systems Command (MCSC), PM-Ammo, Explosives Safety Team. This team consisted of Mr. Michael James, HQMC SD, Tactical Explosives Safety Specialist and Captain Dan Guimond, Aviation Ordnance Officer, MCSC, Environmental and Explosives Safety. The following article is a condensed version of their April 2006 report.*

**Background**

In May 2005, the Commander, Multi-National Coalition, Iraq (MNC-I) directed that all its forces involved with handling explosives and ammunition upgrade their storage and handling procedures from a wartime posture to peacetime standards in accordance with current orders, rules, and regulations. PM-Ammo dispatched an Explosive Safety Team in July 2005 to conduct a TAV in order to ensure that Marine Corps forces in Iraq were able to comply with the direction.

**A view of a class V(W) storage cell in Iraq.**

**Purpose**

The April 2006 TAV followed up on the previous visit in order to complete the final site approval packages for ammunition storage areas operated by U.S. Marine Corps forces in western Iraq, within MNF-W's theater of operations. These applications were initiated during the July 2005 visit to the munitions storage sites located there.

During the TAV for the first camp visited, four site approval packages and one explosives safety waiver package were completed. The site plans included ground and air ASPs, an Aviation Life Support Systems (ALSS) Work Center and Ready Service Locker (RSL), and a Red Label Explosives Handling Area (hot cargo site). The explosives safety waiver was for a combat aircraft loading area (CALA) and a flight line ordnance holding area (OHA). These packages have been forwarded to the Base Explosive Safety Officer (ESO) for submission through the chain of command.

In addition to completing the site approval and waiver packages the TAV team also provided applicable explosives safety training as requested. The July 2005 TAV for the class V(W) ASP recommended placing barricades at selected magazines and hardstands to enhance the storage capacity of the ASP. These barricades have been constructed and net explosive weight (NEW) limits have been adjusted to reflect the additional storage capacity.

Since that first TAV, several new storage sites and a vehicle staging area have been added to the original preliminary site approval package for the class V(W) ASP. These sites were surveyed and appropriate NEW limits were set, per *NAVSEA OP 5 Volume 1*. The completed final site approval package has been submitted to the Camp ESO for review and submission through the chain of command.

During the TAV for the nearby air base, seven site approval packages were completed and information gathered to complete one explosives safety waiver package for the CALA used by F/A-18 and AV-8 aircraft. The site plans include air and ground munition storage areas, three Red Label Explosives Handling Areas, and a template for the submission of all explosives safety site approval requests for RSLs, ALSS Work Centers, and an Egress Systems Work Center.
The completed site plans were submitted to the Base ESO to submit through the chain of command. In addition to completing the site approvals and waiver packages the team also assisted in the preparation of an explosives safety waiver for the fixed-wing CALA.

The air base's class V(A) ASP supports operations for the deployed Marine air combat element in the Al Anbar Province. The class V(A) ASP is comprised of six undefined earth-covered magazines (ECMs), three

barricaded above-ground magazines (AGMs), two modular storage sites, an ordnance assembly area, a holding area, an Explosive Ordnance Disposal (EOD) storage area, and a retrograde lot.

Storage space in a contingency type environment is usually limited due to security concerns and limited real estate. It is imperative to use each storage space to its maximum potential. The employment of properly placed and designed barricades assists in increasing the site's NEW limits without decreasing explosives safety within the ASP. The ASP, following recommendations from the previous TAV, has developed and deployed the recommended barricades, which increased the NEW capacity for selected areas of the ASP—without compromising explosives safety. There were also three areas within the air base that were not site approved, due to operational constraints.

The air base also has a class V(W) ASP, supporting regimental combat teams (RCTs) also deployed in the Al Anbar Province. The class V(W) ASP is comprised of five undefined ECMs, five barricaded AGMs, three modular storage sites, a vehicle storage area, and an issues lot.

Adoption of conventional U.S. explosives safety standards creates challenges for the Operating Forces, too. When explosives storage and handling operations are located in close proximity to ongoing military operations of all types, aircraft commanders need to be especially attentive to maintain a minimum 500-ft altitude when flying over such areas.
During the TAV for the third camp visited, one site approval for a unit Basic Load Ammunition Holding Area (BLAHA) was completed and the package was forwarded to the Base ESO for submission through the chain of command. The team assessed the explosives safety posture and provided applicable explosives safety training as requested. The team also assessed the corrective measures undertaken since the July 2005 TAV, including the reconfiguration of the BLAHA to meet the explosive safety quantity distance (ESQD) standards of OP 5 Volume 1, and a restow of hazard class/division 1.3 materials.

## Summary

The TAV concluded its in-country visit with one overall recommendation for all Marine units in Iraq in order to enhance explosives safety measures throughout the theater of operations. The TAV recommended that all activities in Iraq storing hazard class/division Category 1.1 and 1.2 materials outside the ASPs or BLAHAs complete a risk assessment required by the MNF-W's explosives safety plan. This assessment, when completed, will ensure that commanding officers fully understand the hazards involved with storing these items within their respective areas.

The TAV team noted that there were vast improvements made in explosives safety concerns throughout the theater of operations since the last TAV in July 2005, among them:

- Amnesty programs throughout the theater of operations now meet the requirements of *MCO P8020.10*.
- Establishment of formal Explosives Safety Plans and an ongoing review process of all storage areas.

In the span of approximately 30 days, the TAV team covered three major military installations and completed: explosives safety site approval applications for 8 sites; explosives safety waivers for three additional sites; and, assessed ground and air ASPs, ALSS Work Centers, RSLs, a Red Label Explosives Handling Areas, a CALA, an OHA, a BLAHA, an Egress Systems Work Center, an EOD storage area, and a retrograde lot. As a result of the time and effort invested by the TAV team, however, the Marines on the ground in Iraq can now operate the needed ammunition storage areas, while being much better prepared to do so, safely.

**A covered storage site for class V(W) in Iraq.**

# Mine Clearance System — A Makeover We Can Live With

**Capt Michael Marchand, Mr. Gregory DuChane, Mr. Robert Hutcheson, Jr., and Mr. Thomas E. Swierk**

***This article was extracted from a brief prepared for the 2006 Insensitive Munitions & Energetic Materials Technology Symposium, Bristol, United Kingdom. It has been abridged and edited for publication in* Ammunition Quarterly.**

When a commander is confronted with a deep barrier like a minefield, an array of concertina wire, or other man-made obstructions that slow his combat forces, he can control a variety of tools to counter this threat. Among these tools are the Mine Clearance Systems (MCS). However, even though it is useful to the commander, it can also be dangerous to his Marines because the explosives it contains are sensitive to events it can experience in combat, such as bullet or fragment impacts, and sympathetic detonation. An effort is now underway to not only make the MCS more capable, but safer for Marines to use.

**System Description**

The MCS is a rocket-towed, linear demolition charge (LDC) designed to provide a clear path for combat vehicles during minefield and barrier breaching operations. The system is comprised of a towing rocket motor, a remotely initiated fuze, and the LDC. There are two variants of the MCS. The MK1 and MK2 MCS are similar, the only variance being the packaging configuration. Most ammunition personnel are familiar with these systems by their DoDICs, M913/ML25, respectively.

The total unpacked length of the LDC is 555 feet. The demolition section, containing the energetic materials, is 350 feet long and provides a standoff distance between the vehicle and the explosives of 205 feet. The demolition section consists primarily of a 3/4-inch nylon core rope, 700 demolition blocks of Comp C-4, and two strands of detonating cord. The total explosive weight of the demolition blocks is 1,750 pounds. The blocks are attached to the core rope similar in appearance to a linked sausage.

The M58 (DoDIC M913) configuration is loaded on a Mk155 trailer and towed behind an armored vehicle, or fired from the Assault Breaching Vehicle (ABV). The M59 (DoDIC ML25) is a three-shot system configuration loaded in the Amphibious Assault Vehicle (AAV) for transportation and is deployed from the MK154 launcher. (See Figure 1.) The M68A2 (DoDIC M914) and M69 (DoDIC ML26) are inert variants, used in combination with a live rocket motor for training.

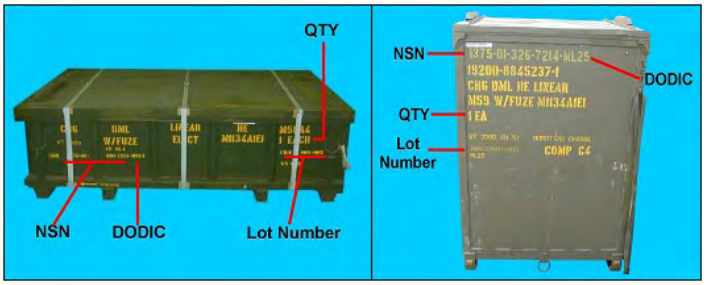



**Figure 1. M58 and M59 LDCs, respectfully.**

The Rocket Motor, MK22 Mod 4 (DODIC J143) is a solid-fuel rocket motor used for towing the M58, M59, M68A2, and M69 LDCs over obstacles and minefields for breaching, training, or test applications. The rocket motor is approximately 77-inches long, 5-inches in diameter, weighs 128 pounds, and has a tractor motor design that incorporates two forward-mounted, rearward facing, exhaust nozzles that are threaded into the motor head-cap. (See Figure 2.)

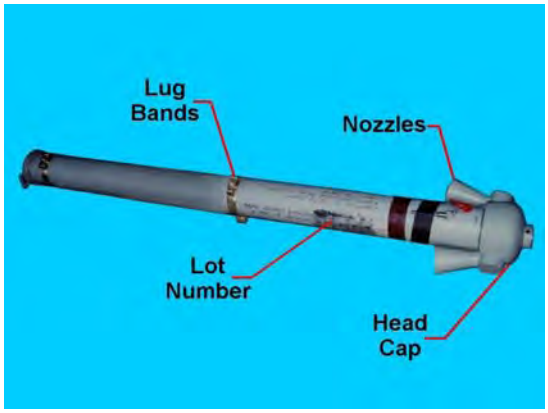



**Figure 2. MK 22 Mod 4, Rocket Motor.**

The M1134A4 Fuze is designed to allow remote detonation of the LDCs. When the LDC and arresting cable are fully extended as a result of firing, the tension on the arming wire provides the force necessary to break

the fuze shear pin and extract the arming pin, enabling the fuze rotor to turn, opening two micro switches and completing an electrical circuit to the fuze circuit board.

Now that the MCS have been briefly introduced, we can turn to our primary purpose, to discuss the ongoing effort to develop an MCS that will qualify as an Insensitive Munition (IM). Bringing the MCS into compliance with the IM standards will take the concerted effort of a number of agencies outside the Marine Corps. First, however, the reader needs to understand what qualifies a munition as "insensitive".

**Insensitive Munition (IM) Characteristics**

To achieve total IM compliance, all system components must meet the minimum standards for reactions to the external events identified in *MIL-STD-2105* (and *STANAG 4439*). These external events are identified as Fast Cook-Off (FCO), Slow Cook-Off (SCO), Bullet Impact (BI), Fragment Impact (FI), Sympathetic Detonation (SD), Shaped Charge Jet (SCJ), and Spall Impact (SI).

As a result of baseline IM tests conducted in 2002, the major deficiencies of the MCS are the ***detonation*** reactions of the M58/M59 LDC when subjected to BI, FI, and SD hazards, and the ***deflagration*** reaction of the MK22 rocket motor when subjected to the SCO hazard. The passing criterion for each of these hazards is a burning reaction, with no detonation propagating as a secondary SD hazard. (See Figure 3.)

**The Makeover**

Based upon the 2002 results, the program office implemented a Technology Transition Agreement (TTA) to address the system's shortfalls. This collaborative program between the Office of Naval Research (ONR), the Program Manager, Sea Strike Future Naval Capability/Urban Asymmetric Expeditionary Operations and the Marine Corps Systems Command, Program Manager for Ammunition (PM-Ammo) will develop and integrate Science and Technology (S&T) products to improve the IM characteristics of the MCS. ONR and Naval Sea Systems Command (NAVSEA) have developed a plan of action and milestones to investigate and incorporate IM technologies as an improvement to the system. In a collaborative arrangement, the Naval Surface Warfare Center's (NSWC's) Dahlgren and Indian Head Divisions are working as a team to complete this effort in support of the Marine Corps. This arrangement capitalizes on prior Navy investments and the established expertise of the individual laboratories.

**Rocket Motor Improvements**. In slow cook-off events, the MK22's entire propellant grain approaches the auto-ignition temperature, approximately 255°F, igniting nearly all of the propellant at once. The existing safety thrust neutralization plug cannot relieve the resulting pressure quickly enough, causing catastrophic failure. It was determined that pursuing a case venting option, as a solution to the SCO hazard, would provide the best potential for improvement.

Mk1 and Mk2, Mine Clearance System (MCS)
IM Test Reactions

| System | FCO | SCO | BI | FI | SD | SCJ |
|---|---|---|---|---|---|---|
| M58/M59* | Type V | Type V | Type I | Type I | Fail | N/A |
| Mk22** | Type V | Type III | Type IV | Type V | (Pass)** | N/A |

*The M58 and M59 were evaluated in accordance to MIL-STD-2105C.

**Testing on the Mk22 Rocket met the requirements of the US Navy Bureau of Weapons WR-50 in 1983.

**Figure 3. Baseline IM Testing**

**Linear Demolition Charge (LDC) Improvements**. Any potential changes to the LDC payload delivered by the MCS have elements that influence both IM and functional (performance related) characteristics. The areas to be addressed in this project must meet both of these elements and include energetic and manufacturing/assembly technologies.

Candidate explosive replacements for the Comp C-4 blocks and the PETN detonating cord and relay cups are being evaluated. The PETN-loaded detonating cord is suspected of being the primary contributor to the detonation reactions observed in the baseline IM tests. The use of PETN detonating cords in a system of this type is no longer allowed in new systems due to DoD's restriction on the use of pure PETN beyond the fuze interrupter of a weapons system. Trade studies were performed to evaluate potential detonating cord replacements. Prior subscale IM tests conducted by the Navy on various detonating cords show that Comp A-5, CH-6, and PBXN-8 can pass bullet impact tests.

**Figure 4. Assault Breaching Vehicle.**

This information, along with a review of existing archival data for other mine clearing systems, provided the basis for a final selection of PBXN-8 as a potential detonating cord material. Since confinement can significantly change IM response characteristics of a munition, the Comp C-4 from the LDC was isolated and its IM characteristics evaluated separately (without the embedded detonating cord and relay cups). The Comp C-4 was also found to be a contributing factor in the IM hazard test failures, so more trade studies were initiated to evaluate potential alternatives. One primary objective was to quantify any advantages, such as cost, producibility, or improved blast output, that alternative materials would offer, in addition to the potential for improving the IM response to the hazard stimuli.

**Container Shielding Upgrade.** Many barrier and shielding concepts, including new materials and material combinations, have been investigated in recent years specifically aimed at reducing or mitigating the IM hazards associated with shock-induced threats. Replacing the energetic materials in the MCS may not be sufficient to make significant improvement or reach full IM compliance. The existing container, used for transport, storage, and deployment of the MCS, must be considered as an opportunity to improve the level of ballistic protection available to the system. Important issues that must be considered, in addition to the improved ballistic protection, are cost and weight (for logistic and deployment considerations). The most promising shielding concept that has been examined, as either an add-on or alternate design for this system, includes using hardened ceramic materials as a means of defeating threat fragments or bullets. Ballistic testing is in-progress to evaluate ceramic ball armor panels for this application. The end result of all these coordinated efforts will be a set of MCS that are more capable, more resistant to external events that occur in combat operations, and ultimately safer for use by the Marines that employ them.

**Future Application of the MCS**

The Assault Breacher Vehicle (ABV), depicted in Figure 4, is a single platform that will provide deliberate and in-stride breaching capability to the assault force of the MAGTF. It is based upon the Abrams Main Battle Tank chassis and incorporates a number of subsystems that provide the ABV with its specific mission capabilities. The integration of a new turret, full-width mine plow, dual MK2 Mine Clearance Systems, lane marking system, remote control unit, and protective weapon system will make the ABV a survivable platform capable of accomplishing its mission while keeping up with the maneuver force. The ABV operates in support of a combined arms task force and is employed by combat engineers to rapidly breach obstacles and create a lane for other vehicles to follow.

**Mr. DuChane is currently assigned as the Principal Engineer for Infantry Weapons Ammunition at PM-Ammo. Capt Marchand is currently assigned as the Assistant Program Manager for Linear and Demolition Charges at PM-Ammo. Mr. Hutcheson is a mechanical engineer currently assigned to NSWC, Indian Head, MD. Mr. Swierk is currently assigned as NAVSEA's Project Manager for IM Technology and System-level Integration at NSWC, Dahlgren, VA.**

# Capitol Police Bestow Medal of Merit Upon Marine Officer©

**PFC Travis J. Crewdson, Combat Correspondent**

Ammunition Quarterly *presents an article that was published in the* Quantico Sentry *in January 2006.*

A Quantico Marine from the Ammo Supply Point [ASP] received the Medal of Merit at the 14th Annual United States Capitol Police Awards ceremony in the Thomas Jefferson Building at the Library of Congress Jan. 12. Chief Warrant Officer 4 Kurt C. Garrett, ASP officer-in-charge, received the award for his continued support of the Capitol Police Department [CPD]. To receive the Medal of Merit, someone must meet certain standards and be nominated by a member of the Capitol Police, who also submits a written proposal. A committee reviews the submissions and chooses the most deserving candidate. Garrett was selected Jan. 6, and the award was handed out at the quarterly awards ceremony for the department. Chief of Police Terrance W. Gainer presented the award to Garrett.

Garrett said he was so shocked when he found out he was selected that he called the CPD and asked them if they had the right guy. "He's very modest," said Capt. A. P. Hill, Deputy of the Logistics Division. "He didn't want everyone to make a big deal out of it." "The award is really for the Marines, but I was just chosen to accept it," said Garrett. "They deserve the credit." "That statement is why Garrett is the type of person who receives this type of award," said Lt. Daniel Malloy, commander of the Capitol Police Bomb Squad.

Garrett, a husband and a father of five boys, has been a pioneer in establishing a relationship with other government services, Hill said. The scope of responsibility has doubled at the ASP since Garrett arrived 18 months ago. The ASP now accounts for and prepares transportation for all munitions in support of the State Department, Department of Justice and Department of Defense assets in the entire Capitol Region, Hill said. There are 31 military units supported locally from Ohio to Georgia, and the ASP also supports units training at A. P. Hill if their ASP cannot, Garrett said.

**CWO4 Kurt C. Garrett, officer in charge at the ASP, receives the Capitol Police Department's Medal of Merit from Terrance W. Gainer, the Chief of Police, for his unit's support of the department's mission at the 14th Annual United States Capitol Police Awards Ceremony in the Thomas Jefferson Building at the Library of Congress Jan. 12. Photo courtesy of Capt. A. P. Hill.**

His unit does not perform the most overall transactions, but they work the hardest, Garrett said. He did the math to figure out that the Marines of the ASP on Marine Corps Base Camp Lejeune did 96 transactions each in Fiscal Year 2004. The Quantico ASP Marines did about 522 transactions each during that same year. With less Marines, Quantico's ASP still does a lot more work, Garrett said.

On behalf of the Capitol Police and especially his unit, Malloy said he truly appreciates the assistance Garrett and his Marines have provided.

**PFC Crewdson is currently assigned to the Public Affairs Office, MCB Quantico. This article is reprinted with permission of the *Quantico Sentry*.**

# ASP Marines Explode all Expectations

**Cpl C. J. Yard**

*This article appeared on the HQMC web site under "MCNews".*

**CAMP TAQADDUM, Iraq (May 30, 2005) --** Accounting for nearly $60 million in ammunition and more than 760,000 pounds of net explosive weight, the Marines of the Ammunition Supply Point [ASP], Supply Detachment, Combat Logistics Regiment 25, 2d Force Service Support Group (Forward) are responsible for storing and keeping track of enough ammunition to support the Regimental Combat Teams [RCTs] within the Area of Operation. "We've got 35 Marines out here," said Staff Sgt. Shaun Adams, staff noncommissioned officer in charge of the ASP and a Columbus, Ohio, native. "This is a big job for the Marines, but for three months straight these Marines have been working to make this place as safe as possible."

**Ordnance from a bunker in the Camp Taqaddum ASP lay scattered after insurgents landed a rocket within the confines of the ASP.**

Though the Marines share the same real estate as the Army, their ordnance is kept separately. Another type of separation is making the ASP compatible, working closely with Kellogg, Brown and Root to keep the ASP safe. "Compatible means types of ordnance can't be stored together," said Chief Warrant Officer William

# ALFT Update

**The Ammunition Logistics Focus Team (ALFT) continues to execute its charter to serve as the ammunition (Class V(W)) transformation catalyst and forum by addressing and prioritizing ammunition issues related to: Logistics Enterprise Integration (LEI), Policy Review and Development, and Naval Logistics Integration (NLI).**

**The ALFT facilitates transformation by conducting Iterative Transformation Initiatives (ITIs). That is, reviewing, researching, and implementing process and product improvements aimed at consolidating, streamlining, and updating the conduct of ammunition business. Anyone may submit an ITI at anytime by completing and submitting an ITI request form found on the PM Ammo website. However, the ALFT specifically solicits ITIs twice each year. All ITIs are presented to the Strategic Steering Board (SSB) for approval and prioritization.**

**In October 2005, the SSB approved these seven ITIs and for action in FY-2006:**

- **Improving Malfunction Reporting procedures**
- **Improving NAR and AIN processes**
- **Standardizing business processes at the ASP's**
- **ROLMS/OIS-R interface with TAMIS-R**
- **Partial Cancellations in TAMIS-R**
- **Updating ROLMS hardware**
- **Establishing a period of instruction on ammunition processes and procedures at the Basic School and the Infantry Officers Course**

**The SSB also assigned one of the MOS 2340 LtCols to serve as the Champion for each ITI.**

**In March, 2006, the ALFT Chair established Integrated Product Teams (IPTs) for each ITI and assigned IPT Leads to work with the Champion to complete and implement the initiatives. Each IPT has had a successful kick-off and has begun a review and assessment phase. Look for ITI updates in future issues of *Ammunition Quarterly*. For questions or comments concerning the ALFT, readers may contact the ALFT Operations Officer at AmmoMail@usmc.mil**

Inns, the ASP officer in charge and Sunbury, Pa., native. "If there were an explosion and two incompatible ordnances were together, it would be bad news. You just can't store types of ammunitions together. We store the ammo a certain way to minimize hazards."

The first thing the Marines had to do after 2d FSSG (Fwd) took over control of the ASP from 1st FSSG was to get a count of all the ammunition within the ASP. Next was reorganizing the ASP, which took nearly 400 movements to accomplish. "The movements were necessary in order to begin the transition from a field Ammunition Supply Point set-up to more of a garrison ASP posture," said Adams. "It is our goal like 1st FSSG's, to continue to improve the ASP for the Marines that follow us. This is our contribution."

Landing a lucky blow, insurgents struck the ASP with indirect fire last year, destroying a small stock pile of ammunition. "It was pretty amazing because two containers of ammunition are still unaccounted for," said Adams. "They literally melted to the ground because everything was so hot. Parts of another ISO container ended up on the other side of the berm. [Explosive Ordnance Disposal] teams come out here regularly to help clean this place up."

As the Marines continue to clean up and improve the ASP they are also taking on the task of storing Captured Enemy Weapons [CEW] and ammunitions. "We started storing the CEWs to redistribute them to the [Iraqi Security Forces]," said Adams. "We aren't destroying them when they're found in weapons caches anymore. We bring them here and then after we get enough they're distributed to the ISF soldiers. We also keep a lot of ammunition for them. Right now we have about 13 million AK rounds."

Keeping the ASP safe and protecting the ammunition falls solely on the 35 ASP Marines, who provide their own security and quick-reaction force. "These guys have been working hard for three months straight now, seven days a week," said Adams. "I'm proud as hell of these Marines. They are getting the job done and they aren't complaining one bit. They're getting the ammo where it needs to be, keeping the RCTs supplied." Using Radio Frequency Identification tags, the ASP Marines are ensuring ammunition makes it from the warehouse to the war fighter in a timely manner. The ammo is pulled three days in advance and then sent to the issues section where the count is verified to ensure 100 percent accountability and then is staged on a pallet with the RFID tag. "We've never used RFID tags


**LCpl Jerry Ashby, an ammo tech from Supply Detachment, Combat Logistics Regiment 25, 2d FSSG (Fwd) marks an ammo can to signify it has been opened and rounds have been removed from it.**

before," said Adams. "Headquarters Marine Corps has been trying to do it. We just said give us the tags and made it happen. It is tricky though, you can't just put a tag on any ordnance because radio waves and some types of ordnance don't play well."

The Marines also ensure the ammunition makes it to the correct location personally. "We put our own Marines with the ammo," said Adams. "We know the RCTs are short on personnel, so instead of making them give up their Marines, we just send one of ours. These Marines out here, they continue to go above and beyond. They are turning this into one of the best ASPs I've ever seen, and that's probably a good thing, since it is in Iraq."

**Cpl Yard was assigned to the 2nd FSSG (now 2nd MLG) at the time this story was written.**

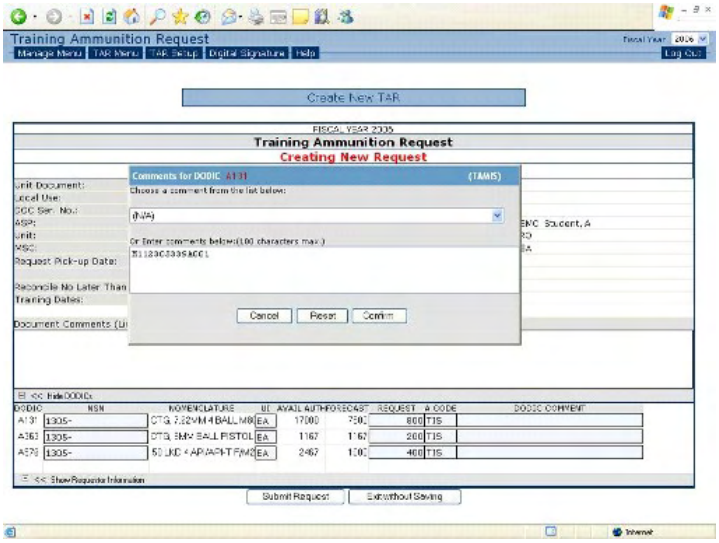
# TAMIS-R Update

## ROLMS Data Transfer to TAMIS-R Process

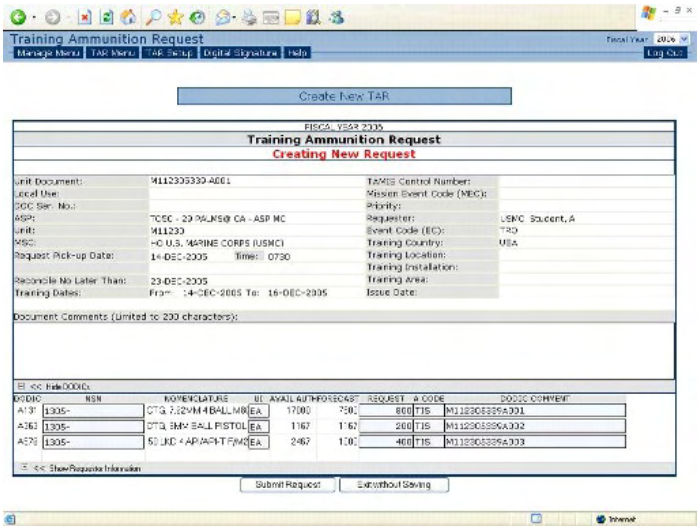
As announced in CG MARCORSYSCOM message DTG 151031Z DEC 2005 (Subject: Deployment of Additional Functionality ISO Issue/Serviceable Turn-In Process for Units Receiving Ammunition Support at Select Marine Corps Sites), the Marine Corps transitioned to an enhancement that exports issue/serviceable turn-in transactions from the Retail Ordnance Logistics Management System (ROLMS) for upload into the Training Ammunition Management Information System – Redesigned (TAMIS-R). This upload automates the manual issue/serviceable turn-in process for Supported Units.

Training presentations relating to the process for Supporting Units (Ammunition Supply Points) ROLMS extraction and TAMIS-R upload and the Training Ammunition Request (TAR) for Supported Units are available on the Program Manager for Ammunition website at URL:http://www. marcorsyscom.usmc. mil/am/ammunition/im&s_division/inventory_management/tamisr.asp Users should review these presentations after downloading them from the site in order to read critical written instructions provided in the speaker notes.

The ROLMS to TAMIS-R process begins with the Supported Unit creation of the TAR. As explained in the TAR training presentation, the complete fourteen character document number must be the first and only characters placed in the DODIC Comments block for each DODIC during initial TAR submission. This is a requirement for TAR with one or multiple DODIC's. Failure to comply with this rule prevents the system from connecting the transactions from the ROLMS upload to a specific TAR and the Supported Units authorization summary would then show the same assets as obligated and expended. Eventually, this leads to negative numbers in the process and restricts the unit's ability to requisition ammunition.




**Input Box for the DODIC Comments block with Correct Document Number format.**




**TAR view with Correct Document Number format.**

## TAMIS-R Helpdesk Address Change

As announced in CG MARCORSYSCOM message DTG 221601Z SEP 2005 (Subject: Change to the Training Ammunition Management Information System /Redesigned (TAMIS-R) Helpdesk Address), the PM Ammunition established Help Desk address for all TAMIS-R issues is now tamis@usmc.mil. All requests for help must be sent to this email address.

# Pine Hill, NJ Native Receives 4th MEB (AT) NCO of the Year Award

**Cpl Ken Melton**

*This article appeared on the HQMC web site under "MCNews".*

**MARINE CORPS BASE CAMP LEJEUNE, N. C. (February 1, 2006) --** Many Marines aspire to be the best, but for Sgt. Kelly E. Rochester her efforts have been solidified as she was awarded the honor of being the 4th Marine Expeditionary Brigade (Anti-Terrorism) [4th MEB(AT)] Non-Commissioned Officer [NCO] of the Year. "I was in disbelief when notified that I would be awarded," the 25-year-old Rochester said with a smile. "I always strive to be the best, and was overwhelmed just to be nominated and even more when I won."

Rochester, a Pine Hill, N.J., native, joined the 4th MEB (AT) two years ago and works as a Ammunition Technician, a job that requires her to monitor allocations of ammo for the entire brigade and provide assistant here, throughout the east coast and abroad for any unit's ammunition scenarios. She also played a big role in setting up the Training Ammunition Management Information System-Redesign (TAMIS-R) and is often a "go-to" source for training and help with the system. "I love my job and the chance to lead Marines, but I still have a lot to learn," the 1998 Overbrook High School graduate said humbly.

Rochester won the NCO of the Quarter in March 2005 for 4th MEB (AT) Headquarters Company and the Brigade level NCO of Quarter during the same month. She believes that she was able to achieve these accomplishments by being determined to do better and having great examples of leadership in her company first sergeant, Lisa K. Nilsson, 39, and commanding officer, Major Anita W. Carroll, 39, who was also NCO of the Year in 1994 for 2nd Force Service Support Group. "I am honored to have a Marine like Rochester in my command. For her to emulate me and win the same award as I did is like passing a torch," Carroll, the Ithaca, N.Y., native said proudly. "I know she will continue to set the example for other Marines, and I look forward to see how she will continue to improve herself and those who work with her."

"She deserves this award for all the hard work she has done," said Nilsson, a Pen Argly, Penn., native. "She has always been an NCO who led from the front and has never wavered."

When Carroll first met the soft-spoken Rochester two years ago she was a new mother, but she did not use that as in excuse to keep her from her responsibilities of being a Marine. "She told me before we ran our PFT that she wanted to see if she could do better after having a child and she bested her run time," said Carroll, a 1984 Northeast Bradford High School graduate in Rome, Penn., and 1989 Cornell University graduate. "She did not have to run, but that shows what type of person she is. Watching Marines develop into something like that gives me pride."

**Sgt Kelly E. Rochester, ammo tech, 4th MEB (AT) (No longer an active unit) receives an NCO sword and a NAM from the CO, Col Glen R. Sactchleben.**

"I know that she will continue to do her best and pass on all her knowledge to other Marines," Nilsson, a 1984 Pen Argly High School graduate and 2003 Strayer University graduate added. "She is great leader who is determined, motivated and challenge driven, a great recipe for an NCO and perfect for NCO of the year."

Rochester feels that her drive comes from her supportive husband, Joshua N. Rochester, wanting to set a good

example for her children and reflects on winning this award as being the next step to being a better Marine. "Most people would think that the pressure is off when you win something like this, but it's the exact opposite," Rochester, the University of Phoenix junior commented. "This is just the first step in a new direction in my career, and I will continue to learn, work hard and hopefully one day one of my Marines can take home this honor."

**Cpl Melton was assigned to II MEF at the time this article was written.**

## Officer Selection Announcement Correction

*In the Winter 2006 issue of* Ammunition Quarterly, *the following officers in the 2340 occupational field were incorrectly listed as selected for LDO. They were selected for promotion to major instead. The Editorial Staff apologizes for the error.*

**R G Pratt**
**J D Somich**


**How would you like one of these handsome coffee mugs? Just write an article for *Ammunition Quarterly*, and you can have one compliments of PM-Ammo. Submit articles to AmmoMail@usmc.mil**

## Ammunition Management and Self-assessment Guide for Supporting and Supported Units

***A new guide is in the works to assist ground ammunition Marines working at ASPs better manage their inventory.***

**During the 2005 Annual Ground Ammunition Conference, a working group discussed the merits of a proposed Physical Inventory Control Program (PICP) based on the results of a pilot program conducted at the MCB Quantico Ammunition Supply Point (ASP). It was the working groups recommendation that the initiative was worth examining in an expanded capacity which resulted in a further pilot program being executed at Camp Pendleton and Parris Island ASPs. Encouraged by the results of the pilot program, a full PICP program is being implemented at 10 ASPs throughout the Marine Corps. The intent to execute was provided in the *CG MARCORSYSCOM message 131534Z MAR 06.***

**In conjunction with the PICP, the PM Ammunition Analysis and Evaluation Team has developed an easy to use, reference manual for common inventory management/inventory analysis (IM/IA) tasks (including PICP). The Guide is titled the Ammunition Management and Self-assessment Guide for Supporting and Supported Units and is currently being staffed.**

**The Guide consolidates the key IM/IA requirements into one document. It is not intended to supersede or alter the primary publications, directives, instructions, and orders on which it is based. Rather, it provides a resource reference derived from those relevant publications. The Guide is meant to facilitate improvements in IM and IA by identifying critical IM and IA tasks (with appropriate references) and providing general information and how-to for each task.**

**This Guide also provides a foundation for IM/IA Desk-top Procedures and Turnover Files. It will assist ammunition managers in assessing task proficiency by providing a base document for executing IM/IA self-assessments conducted as part of the installation Explosives Safety Officer's (ESO's) self-assessment program. To assist in IM/IA self-assessments, the guide provides:**

- **A summary of required reports**
- **A summary of Supporting Unit tasks in checklist form**
- **A summary of Supported Unit tasks in checklist form**
- **An executive-level self-assessment tool for Commanding Officers**
- **A consolidate reference list**

**The Guide is applicable to all Marine Corps units/activities that report, manage, store, or use class V(W) ammunition. The Guide focuses on the primary ammunition management actions performed by ASPs and the units they support.**

**Look for more information on the Ammunition Management and Self-assessment Guide for Supporting and Supported Units as well as the PICP in future issues of the AQ.**

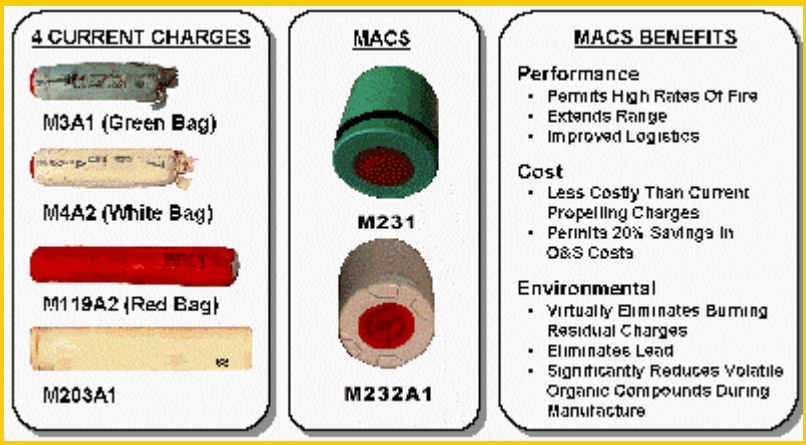
.

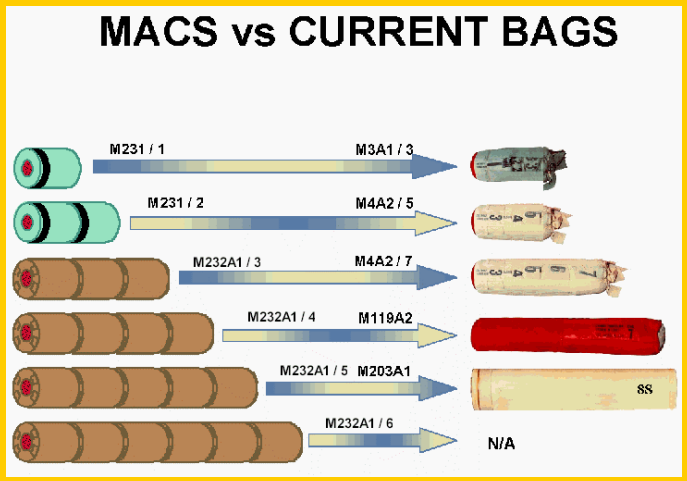
# Artillery Ordnance Reviewed

## DA12, MACS, 155mm, Charge Propellant M231

**Features:** The M231 is a Low-Zone Modular Artillery Charge System (MACS) used as a propelling charge for 155mm family of artillery projectiles. The M231 is used at lower zones (1 or 2 increments at a time) and is based on the classical uni-charge design, i.e. bi-directional center core ignition, granular propellant contained in a rigid combustible case. MACS will offer improvements in logistics, range, and simplicity when compared to existing bag propellants (M203 series, M119 series, M3 series and M4 series).

**Background:** The Marine Corps is no longer procuring the existing bag propellants and over the next few years, as the last of our bag propellants are expended, the MACS will become the only 155mm propellant for Marine Corps artillery. Because the MACS charges are issued in an each configuration (vice by the canister) there is no need to burn left over increments like we did with the old bag charges.



## DA13, MACS, 155mm, Charge Propellant M232A1

**Features:** The M232A1 is a Top-Zone Modular Artillery Charge System (MACS) used as a propelling charge for 155mm family of artillery projectiles. The M232A1 is used at higher zones (3, 4, 5 or 6 increments at a time) and is based on the classical uni-charge design, i.e. bi-directional center core ignition, granular propellant contained in a rigid combustible case. MACS will offer improvements in logistics, range, and simplicity when compared to existing bag propellants (M203 series, M119 series, M3 series and M4 series).

## NA09, Multi-Option Fuze Artillery (MOFA)

**Features:** The M782 Multi-Option Fuze for Artillery (MOFA) M782 (DODIC NA09) is compatible with all current 105mm and 155mm bursting type artillery projectiles and is fired from the M198 155MM Medium Towed Howitzer and is compatible with the Lightweight Towed Howitzer Weapon System. It employs state-of-the-art advanced electronic technologies including Millimeter-wave Monolithic Integrated Circuit (MMIC) transceiver, patch antenna, harmonic signal processor and liquid reserve battery. Together, these devices provide immunity to electronic counter measures, enhance overall system performance, and improve producibility through the use of a modular design.

**Background:** The MOFA is inductively set in the Proximity, Electronic Time, Point Detonating, or Delay mode. As a singular replacement for five different fuzes in the Marine Corps' inventory, the MOFA will reduce the logistical footprint and artillery ammunition handling requirements.

# PM-Ammo Contact Roster

| Billet | Tel#(Comm 703/DSN: 378) |
|---|---|
| PM | 432-3159 |
| DPM | 432-3164 |
| Off Mgr | 432-3165 |
| Hd,AP&BD | 432-3107 |
| Inf Wpns Tm | 432-3147 |
| LCAT | 432-3114 |
| Str Ammo Bus Tm | 432-3107 |
| Hd,IM&SD | 432-3129 |
| Inv Mgt Tm | 432-3119 |
| Analysis&Eval Tm | 432-3158 |
| Sys Tm | 432-3117 |
| MCPDSysRep | 540-720-9400 |
| Hd,ProdSptDiv | 432-3170 |
| EES Tm | 432-3157 |
| Plans&Exec | 432-3140 |
| Ops | 432-3168 |

## Liaisons (DSN)

| | |
|---|---|
| DDESB | 328-0449 |
| NAVMAG Pearl Harbor | (C) 808-471-1111 X141 |
| NWS Charleston | 794-4378/4004 |
| NWS Earle | 449-2537/2539 |
| NWS Fallbrook | 873-3645 |
| NWS Yorktown | 953-7583 |
| NSWC Crane | 482-5427 |
| NOSSA Indian Head | 354-4965 |
| FltAct Sasebo | 315-252-5530 |
| FltAct Yokosuka | 315-243-1909/8 |
| JMC Rock Island | 793-4808/5549 |
| AAA Crane | 482-1552 |
| AAP McAlester | 956-6312 |
| AD Tooele | 790-2062 |
| PEO Ammunition | (C) 973-724-2047 |

# "Ammunition Quarterly"

**The Ammunition Quarterly (AQ) provides a network and communications medium for the Marine Corps Ammunition Community to share information. It is your newsletter and your comments, suggestions, or questions are welcome. As always this is the Ammunition Community's Newsletter and is intended to provide new and experienced Ammunition personnel with pertinent information. Produced quarterly, the AQ is posted to the Program Manager for Ammunition Web Page, The Knowledge Management Portal, and distributed by hard copy to select organizations lacking full IT capability. As well, our AQ is distributed widely throughout the Corps to include most General Officers.**

**The editorial staff invites authors to submit articles dealing with topics drawn from several areas pertaining to Ammunition. Articles may be on a wide array of issues and topics, including processes, analysis, evaluation, activity, success stories, research, and ammunition safety. Have you found a way to do something smarter, faster, or improve your activity? If so, the AQ is a forum in which you can share your successes with your counterparts throughout the Marine Corps. Ultimately, these shared ideas will improve our ability to rapidly get steel on the target!**

**Make a commitment today and write an article to enhance the knowledge of the "Ammunition Community." Challenge your Marines and Civilian counterparts to put pen to paper and be proactive within their community. And don't forget, every author published will receive a handsome Ammo Quarterly Coffee Mug!**

**Provide ideas/articles for Ammo Quarterly via mail to the Program Manager for Ammunition, MARCORSYSCOM, 2200 Lester Street, Quantico, VA 22134-5010, or via e-mail to AmmoMail@usmc.mil**